

64/0  
4-26-01 0280

OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,007

DATE: 04/10/2001  
TIME: 16:44:16

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\04102001\I820007.raw

ENTERED

4 <110> APPLICANT: YAN, Chunhua et al  
6 <120> TITLE OF INVENTION: ISOLATED HUMAN TRANSPORTER PROTEINS,  
7 NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,  
8 AND USES THEREOF  
10 <130> FILE REFERENCE: CL001205  
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/820,007  
C--> 12 <141> CURRENT FILING DATE: 2001-03-29  
12 <160> NUMBER OF SEQ ID NOS: 4  
14 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
16 <210> SEQ ID NO: 1  
17 <211> LENGTH: 2434  
18 <212> TYPE: DNA  
19 <213> ORGANISM: Human  
21 <400> SEQUENCE: 1  
22 tgcagtttaa gtgttcggat tccaaggaa acagacaaac ctcacgaaag gaaggaagca 60  
23 agcaagcaag gaaggaactg caggaggaaa agaacaggca gaacagcgag aagaataaag 120  
24 gaaaagggggg gaaaaacacca aatctatgtat tggacctggg cttcttttc gccaatgcaa 180  
25 aaaggaaatat gcagcacatt tttgccttct tctgcaccgg tttccttaggc gcgtagtag 240  
26 gtgcraattt ccccaacaat atccagatcg ggggattatt tccaaaccag cagtcacagg 300  
27 aacatgtgc ttttagattt gcttgcgc aactcacaga gcccccaag ctgtcccccc 360  
28 agattgatat tgcacatc agcgcacagct ttgagatgc ctatagattc tttcccaagt 420  
29 ttcacaaagg agtctatgcc atcttgggt tttatgcacg taggactgtc aacatgtgc 480  
30 ctccttttgc tggggccctc cacgtctgtc tattacgcg gagcttccc gttgatacat 540  
31 ccaatcagtt tgccttcag ctgcgcctg aactgcagga tgccttcate agatcattg 600  
32 accattacaa gtggcagaaa tttgtctaca tttatgtgc cgaccqqqgc ttatccgtcc 660  
33 tgcagaaagt cctggataca gctgctgaga acaaactggca ggtgacagca gtcacacattt 720  
34 tgcacaaccac agaggaggaa taccggatgc ttttcagga cctggagaag aaaaaggagc 780  
35 ggcgtgtgtt ggtggactgt gaatcagaac gctcaatgc tatcttggc cagattataa 840  
36 agctagagaa gaatggcata ggcttcaacttgc aatcttgc aaatcttgc ttcatggaca 900  
37 ttgacttaaa caaatcagagatggc ccaatgtgc aggtttccag ctgtgtact 960  
38 acacagacac tattccggcc aagatcatgc agcagtggaa gaatagtgtat gctcgagacc 1020  
39 acacacgggt ggactggaaag agaccaagt acaactctgc gtcacccatc gatgggggtga 1080  
40 aggtgtatgc tgaggcttc cagagcttc gggggcagag aattgtatata tctgcgggg 1140  
41 ggaatgtgg ggattgtctg gctaaccctag ctgttccctg gggccaaggg atcgacatcc 1200  
42 agagagctt gcaatgtgtc cgatttgcg gtttacagg aaacgtgcg tttatgaga 1260  
43 aaggacgcgg gaccaactac acgctccacg tgattgaaat gaaacatgc ggcacccgaa 1320  
44 agattggta ctggatgaa gatgataat ttgccttc agccacccat gccaagctg 1380  
45 gggggataa ttcaatgttt cagaacagaa catacatgt cacaacaatc ttagaagatc 1440  
46 ctatgtat gctcaagaag aacgcaatc agtttggggg caatgaccgt tacggggct 1500  
47 actgtgtata gctggggca gagattgcca agcacgtggg ctactctac cgtctggaga 1560  
48 ttgtcaatgtt tggaaaatac ggagccccag accctgacac gaaaggctgg aatggcatgg 1620  
49 tggagagat ggtctatgg gtaagttcac tgcagggtgg gaaatttagag ggcggaggca 1680  
50 gagggtttga caggaaatca tttgggttt gggggccct gcccacagat gtctatgaaa 1740  
51 ccctgttaatt gatgtgtttt gctgtgtac agatgatgtca tccaaatcc aatttctca 1800  
52 gacacttctt gttcaggatca ctggccctag gtcacccat cccactcaga gtcttgcac 1860  
53 gtcagttgtat tgcgtccaa cacaggtgac agcatagctc caagatcaat ttttttgagg 1920  
54 cagactgtcg agttgtctat acaaagtcaac ttgtggctct ctcagttatca gtttcttc 1980

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,007

DATE: 04/10/2001  
TIME: 16:44:16

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\04102001\I820007.raw

55 tgcattttaa tgcattctgga gccaaacctaa ctttcttagtt acttgcctct ctagtttcat 2040  
 56 gctctctcat gaaatttcca attcagtc aaatcccatttta attactctgt tcccttaggt 2100  
 57 gtcctcccttcc actctccacc cctaaagatac tactccctca aaacctatataa caaataatac 2160  
 58 ttttttcagg gtgtgtttct ttcttttttc tcataatagg tatgaatgtg ctttttaatt 2220  
 59 gttctcgct tccctatag aatttagtg ctgggtttt ttaatgggtt accctgcctt 2280  
 60 atataacggt tacctgtgt aacgggttag gactattcta tctttatagt gtcaccacaca 2340  
 61 cttgaaataa cttcatgcac aattgctata aaatctcaa taaattacag cagtttgaa 2400  
 62 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 2434  
 64 <210> SEQ ID NO: 2  
 65 <211> LENGTH: 519  
 66 <212> TYPE: PRT  
 67 <213> ORGANISM: Human  
 69 <400> SEQUENCE: 2  
 70 Met Gin His Ile Phe Ala Phe Phe Cys Thr Gly Phe Leu Gly Ala Val  
 71 1 \* 5 10 15  
 72 Val Gly Ala Asn Phe Pro Asn Asn Ile Gln Ile Gly Gly Leu Phe Pro  
 73 20 25 30  
 74 Asn Gln Gln Ser Gln Glu His Ala Ala Phe Arg Phe Ala Leu Ser Gln  
 75 35 40 45  
 76 Leu Thr Glu Pro Pro Lys Leu Leu Pro Gln Ile Asp Ile Val Asn Ile  
 77 50 55 60  
 78 Ser Asp Ser Phe Glu Met Thr Tyr Arg Phe Cys Ser Gln Phe Ser Lys  
 79 65 70 75 80  
 80 Gly Val Tyr Ala Ile Phe Gly Phe Tyr Glu Arg Arg Thr Val Asn Met  
 81 85 90 95  
 82 Leu Thr Ser Phe Cys Gly Ala Leu His Val Cys Phe Ile Thr Pro Ser  
 83 100 105 110  
 84 Phe Pro Val Asp Thr Ser Asn Gln Phe Val Leu Gln Leu Arg Pro Glu  
 85 115 120 125  
 86 Leu Gln Asp Ala Leu Ile Ser Ile Asp His Tyr Lys Trp Gln Lys  
 87 130 135 140  
 88 Phe Val Tyr Ile Tyr Asp Ala Asp Arg Gly Leu Ser Val Leu Gln Lys  
 89 145 150 155 160  
 90 Val Leu Asp Thr Ala Ala Glu Lys Asn Trp Gln Val Thr Ala Val Asn  
 91 165 170 175  
 92 Ile Leu Thr Thr Glu Glu Gly Tyr Arg Met Leu Phe Gln Asp Leu  
 93 180 185 190  
 94 Glu Lys Lys Glu Arg Leu Val Val Val Asp Cys Glu Ser Glu Arg  
 95 195 200 205  
 96 Leu Asn Ala Ile Leu Gly Gln Ile Ile Lys Leu Glu Lys Asn Gly Ile  
 97 210 215 220  
 98 Gly Tyr His Tyr Ile Leu Ala Asn Leu Gly Phe Met Asp Ile Asp Leu  
 99 225 230 235 240  
 100 Asn Lys Phe Lys Glu Ser Gly Ala Asn Val Thr Gly Phe Gln Leu Val  
 101 245 250 255  
 102 Asn Tyr Thr Asp Thr Ile Pro Ala Lys Ile Met Gln Gln Trp Lys Asn  
 103 260 265 270  
 104 Ser Asp Ala Arg Asp His Thr Arg Val Asp Trp Lys Arg Pro Lys Tyr  
 105 275 280 285

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,007

DATE: 04/10/2001  
TIME: 16:44:16

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\04102001\I820007.raw

106 Thr Ser Ala Leu Thr Tyr Asp Gly Val Lys Val Met Ala Glu Ala Phe  
107 290 295 300  
108 Gln Ser Leu Arg Arg Gln Arg Ile Asp Ile Ser Arg Arg Gly Asn Ala  
109 305 310 315 320  
110 Gly Asp Cys Leu Ala Asn Pro Ala Val Pro Trp Gly Gln Gly Ile Asp  
111 325 330 335  
112 Ile Gln Arg Ala Leu Gln Gln Val Arg Phe Glu Gly Leu Thr Gly Asn  
113 340 345 350  
114 Val Gln Phe Asn Glu Lys Gly Arg Arg Thr Asn Tyr Thr Leu His Val  
115 355 360 365  
116 Ile Glu Met Lys His Asp Gly Ile Arg Lys Ile Gly Tyr Trp Asn Glu  
117 370 375 380  
118 Asp Asp Lys Phe Val Pro Ala Ala Thr Asp Ala Gln Ala Gly Gly Asp  
119 385 390 395 400  
120 Asn Ser Ser Val Gln Asn Arg Thr Tyr Ile Val Thr Thr Ile Leu Glu  
121 405 410 415  
122 Asp Pro Tyr Val Met Leu Lys Lys Asn Ala Asn Gln Phe Glu Gly Asn  
123 420 425 430  
124 Asp Arg Tyr Glu Gly Tyr Cys Val Glu Leu Ala Ala Glu Ile Ala Lys  
125 435 440 445  
126 His Val Gly Tyr Ser Tyr Arg Leu Glu Ile Val Ser Asp Gly Lys Tyr  
127 450 455 460  
128 Gly Ala Arg Asp Pro Asp Thr Lys Ala Trp Asn Gly Met Val Gly Glu  
129 465 470 475 480  
130 Leu Val Tyr Gly Val Ser Ser Leu Gln Gly Gly Lys Leu Glu Gly  
131 485 490 495  
132 Gly Arg Gly Phe Asp Arg Lys Ser Phe Gly Gly Trp Val Ala Leu Pro  
133 500 505 510  
134 Thr Asp Val Tyr Glu Thr Leu  
135 515  
138 <210> SEQ ID NO: 3  
139 <211> LENGTH: 213456  
140 <212> TYPE: DNA  
141 <213> ORGANISM: Human  
143 <220> FEATURE:  
144 <221> NAME/KEY: misc\_feature  
145 <222> LOCATION: (1)...(213456)  
146 <223> OTHER INFORMATION: n = A,T,C or G  
148 <400> SEQUENCE: 3  
149 ttcaaagtag taagataaa aaactgaaaa tggagaaaatt aaaagatgga atcattaaat 60  
150 cagagactct taatgttggc agagaccta gaagtatct ttcctgattc tttctctca 120  
151 tttccatgt ctgatgctta ttcttccttt agaaggttcc taccctgtgc ttgtgttat 180  
152 tagagccaa gagtaagag ctggggcctg atggggcat ttactgtgtt taaatgccaa 240  
153 atcttttca ttagcagtga aaacttgggg ttagtttta gacctctgtt tttcatctta 300  
154 taaaatggc atgaggctac ctacacaggt attgtacaaa taaatgtgc aggtgcattt 360  
155 ctttagcatgg tacctggcac attcaaata gtgaaataac attagcctta aaaattattt 420  
156 tagctaattt attaataatat gtgaaagtgc ataggaatc acaaaggcatt tgacctccaa 480  
157 gttttccata ttttgggct tcattgtaca tggtcagata ttttttacaa atcccagtcc 540  
158 tttagctgt cactcaagtc cacatgatat acagtctgg tgagggaaat gaagagtctg 600

RAW SEQUENCE LISTING DATE: 04/10/2001  
PATENT APPLICATION: US/09/820,007 TIME: 16:44:16

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\04102001\I820007.raw

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/820,007

DATE: 04/10/2001  
TIME: 16:44:16

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\04102001\I820007.raw

208 ggccggttgg agtggccatg gagtaacttg cttgtttcc tgacacctgt taagctacat 3600  
209 cctgaagtgt gtacgtatct gtgtgttagt gcctaaacacg caaaacttcc tgccttcagg 3660  
210 ggagacactt ccctttagc ccagcccgta gccttctact cctcaaccctt ccatctttc 3720  
211 tcttcatttc attgcagagg aggagaaaagg ggacaggaaat gtgtttgggg tttgttcatc 3780  
212 tgggggaaat ggggagcatc ataataagaat ttttttttgc ttttcatctt taaaatggg 3840  
213 agcacttgta catgtggaaa tcaactggc tttacatgtgg cattgtttac atttgcgtt 3900  
214 atatactacc ttttttttgc ggttggaaat gtgtttgttca gtatatttgc gtatatagt 3960  
215 aatggtataa atgcatttgc atgtttcatg ttttttttgc tttttctcat gtatctctgc 4020  
216 atattttaa aattatattt aatgcatttgc ttttttttgc tttttctcat gtatctctgc 4080  
217 tggtttcaaa aaaaaaaagat attgaagcat taaaatgttgc aacaaaatgc tgaaaatatac 4140  
218 actgcattca ggttagtactt gatttttgc ttttttttgc ttttttttgc ttttttttgc 4200  
219 atttatttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4260  
220 ggactgtgtat tactgttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4320  
221 ctcttagaaat ggctgattttt aatttttttttgc ttttttttgc ttttttttgc ttttttttgc 4380  
222 tacaaggta agccatggac ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4440  
223 tatacctttt actagaatag aatgttttgc ttttttttgc ttttttttgc ttttttttgc 4500  
224 ttgaagcaca aggttccaccatgc aacatggcaatgc ttttttttgc ttttttttgc ttttttttgc 4560  
225 tcccttaggtaa ctggatcatgtgtgttgc aatgttgc ttttttttgc ttttttttgc ttttttttgc 4620  
226 caagagttttt ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4680  
227 ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4740  
228 aaggccacag ggttcccgatgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4800  
229 tcccttaggtaa ctcttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4860  
230 ggggtggggg gtttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4920  
231 caagggggatgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 4980  
232 aggggttacac aatcaaatttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5040  
233 aagtcatttc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5100  
234 ctaccactca aggttccaccatgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5160  
235 agtggatgttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5220  
236 ctataggggg ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5280  
237 ttgtcgcaac tcacagggcc cccgaagctgttttttttgc ttttttttgc ttttttttgc 5340  
238 gagagttttt ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5400  
239 ggccttagacc aatggaaatggg ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5460  
240 gttggccattt ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5520  
241 gattcccgatgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5580  
242 ctgtcagttt ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5640  
243 ttgcagaggt ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5700  
244 tagaatttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5760  
245 ctacatgttta aatggacaca atgttttttgc ttttttttgc ttttttttgc ttttttttgc 5820  
246 atctggtttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5880  
247 aaaaatgttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 5940  
248 aaacagaaca aatggatgttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6000  
249 atgcatttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6060  
250 aaaggaagcc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6120  
251 caggaaacat ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6180  
252 ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6240  
253 ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6300  
254 ccatatttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6360  
255 gtttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6420  
256 taaaataatgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc ttttttttgc 6480

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/820,007

DATE: 04/10/2001  
TIME: 16:44:17

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\04102001\I820007.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:1622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:1624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:1628 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:1629 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:2772 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3619 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3621 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3703 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3704 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:3706 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3